

WHAT IS CLAIMED:

1. A machine for the manufacture of a fiber material web, comprising:  
a shoe pressing unit;  
a cylinder comprising one of a drying and tissue cylinder, wherein said shoe pressing unit and said cylinder are arranged to form at least one press nip;  
a water absorbent carrier band;  
a water-impermeable pressing band, wherein said water absorbent carrier band and said water-impermeable pressing band are guided through said at least one press nip, and the fiber material web is adapted to pass through said at least one press nip with said water absorbent carrier band and said water-impermeable pressing band; and  
said at least one press nip having a length in a web travel direction of less than or equal to approximately 60 mm,  
wherein a pressure profile which results over said press nip length has a maximum pressing pressure which is greater than or equal to approximately 3.3 MPa.
2. The machine in accordance with claim 1, wherein said press nip length is less than or equal to approximately 50 mm and the maximum pressing pressure is greater than or equal to approximately 4.3 MPa.
3. The machine in accordance with claim 2, wherein said water-impermeable pressing band is at least one of grooved and blind bored.
4. The machine in accordance with claim 3, wherein the fiber material web comprises one of a tissue paper and a hygienic paper web.
5. The machine in accordance with claim 1, wherein the maximum pressing pressure is exerted in a rear half of said press nip length with regard to the web travel direction.
6. A process for the manufacture of a fiber material web, comprising:  
passing the fiber material web to be dewatered through a press nip together

with a carrier band; and

subjecting the fiber material web to be dewatered to a pressing pressure of at least 3.3 MPa in the press nip for a time duration of at most 3 ms.

7. The machine in accordance with claim 6, wherein the fiber material web comprises one of a tissue paper and a hygienic paper web.

8. The machine in accordance with claim 6, wherein the fiber material web comprises curled fibers.

9. A process for the manufacture of a fiber material web, comprising:  
passing the fiber material web to be dewatered through a press nip together with a band; and

subjecting the fiber material web to be dewatered to a pressing pressure of at most 2 MPa in the press nip for a time duration of at least 3.5 ms.

10. The machine in accordance with claim 9, wherein the fiber material web comprises one of a tissue paper and a hygienic paper web.

11. The machine in accordance with claim 9, wherein the fiber material web comprises curled fibers.